



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/521,490

01/18/2005

Yutaka Saitou

NGB-37395

6965

116 7590 06/08/2010

PEARNE & GORDON LLP
1801 EAST 9TH STREET
SUITE 1200
CLEVELAND, OH 44114-3108

EXAMINER

HSIEH, PING Y

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

06/08/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,490	Applicant(s) SAITOU ET AL.	
	Examiner PING Y. HSIEH	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,9,13 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,9,13 and 22-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/3/10</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/26/10 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2618

3. Claims 1, 2, 4, 9, 13 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoji et al. (U.S. PG-PUB NO. 2002/0169010), hereinafter referred as Shoji, in view of Schober (U.S. PATENT NO. 4,471,493) and further in view of Masaki (U.S. PG-PUB NO. 2003/0050032).

-Regarding claim 1, Shoji discloses a portable radio device comprising:

a first casing (**upper casing 3, fig. 1**);

a second casing (**lower casing 4, fig. 1**);

a connection portion, connecting the first casing to the second casing so as to freely rotate (**hinge portion 2 as disclosed in fig. 1 and paragraph 26**);

a first antenna element, provided in the first casing (**the outer sheath of the shield box 14 is used as the antenna as disclosed in fig. 4 and paragraph 32**);

a conductor element, provided in the second casing (**ground layer 10b' as disclosed in fig. 4 and paragraph 32**); and

at least two feeding portions (**i.e., switching terminals 23a and 23b, fig. 12**), each feeding portion having one end electrically connected to the first antenna element through the connection portion and the other end electrically connected to the conductor element (**as disclosed in fig. 12 and paragraph 40**),

wherein the connection portion has electric conductivity to form an antenna as a whole by the first antenna element, the connection portion and the

conductor element **(flexible cable 9 as disclosed in fig. 4 and paragraph 31; and antenna 14 as disclosed in fig. 4 and paragraph 32),**

wherein the connection portion is arranged away from the conductor element at a distance **(as shown in fig. 4)**, and the feeding portions are separate from each other along the rotation shaft in a prescribed gap **(as shown in fig. 12).**

However, Shoji fails to specifically disclose the connection portion including a rotation shaft; and a dipole antenna.

Schober discloses a rotation shaft provided in the connection portion **(connector 18 as disclosed in fig. 2 and further disclosed in col. 3 lines 45-47 and 60-63)**, and a dipole antenna **(as disclosed in col. 2 lines 55-57)**

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the connection portion of Shoji to include the features as disclosed by Schober. One is motivated as such in order to provide a wireless extension telephone remote unit with a self contained dipole antenna.

However, the combination fails to specifically disclose at least two connection portions.

Masaki discloses two connection portions 61 and 62 in fig. 7 and further disclosed in paragraph 54.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the device of Shoji and Schober to include the

Art Unit: 2618

features as disclosed by Masaki. One is motivated as such in order to reduce the diversity antenna effect.

-Regarding claim 2, the combination further discloses a plurality of first antenna elements **(Shoji, antenna 14 with matching circuits 20 or 22, fig. 12)** are provided in the first casing **(Shoji, as disclosed in fig. 4, 11-13)**; and the portable radio device further comprising a switching portion which switches the plurality of first antenna elements so as to connect to the feed portion **(Shoji, switch 23, fig. 12)**.

-Regarding claim 4, the combination further discloses a half-wavelength element being electrically connected between at least one of the plurality of the first antenna elements and the switching portion **(Shoji, matching circuit 20 22 as disclosed in fig. 12 and paragraph 40; although Shoji does not specifically disclose the matching circuit to be a half-wavelength element, it would be obvious to do so in order to minimize a reflection level and input impedance)**.

-Regarding claim 9, the combination further discloses the antenna element and the conductor element are respectively formed in plate shapes along the surface of the first casing and the second casing **(Shoji, as shown in fig. 4)**.

-Regarding claim 13, the combination further discloses a second antenna element provided in the second casing near the connection portion **(Shoji, antenna 16, fig. 13)**;

a receiving field intensity measuring portion, measuring the receiving field intensity of a signal received by the first antenna element or the second antenna element **(Shoji, sensor 26 as disclosed in fig. 13 and paragraph 43-45)**; and

a switching portion, selecting and switching the antenna element having a higher receiving field intensity to a connection to a signal processing portion for performing a signal process in accordance with the measured result of the receiving field intensity measuring portion **(Shoji, switch 25 as disclosed in fig. 13 and paragraph 43-45)**,

wherein the first antenna element has a first feeding point for electrically connecting to the conductor element **(Shoji, as disclosed in paragraph 32)**;

wherein the second antenna element has second feeding point for electrically connecting to the conductor element **(Shoji, as disclosed in paragraph 32)**; and

wherein the first feeding point and the second feeding point are provided at the diagonal positions of opposed sides when the first casing and the second casing are opened **(although the reference does not disclose the same positions, it is obvious that the position of the feeding points are design choice and does not have to be identical)**.

-Regarding claim 22, the combination further discloses the first antenna element is an electric conductive frame forming a part of the first casing **(Shoji, as shown in fig. 4)**.

-Regarding claim 23, the combination further discloses each of the at least two connection portion includes a first hinge portion provided in the first casing **(Shoji, connection between flexible cable 9 and antenna 14, fig. 4; Masaki, fig. 7)** and a second hinge portion provided in the second casing **(Shoji, connection between flexible cable 9 and transmitting circuit 15, fig. 4)**, wherein the first hinge portion connected to an end of the first antenna element **(Shoji, as shown in fig. 4)**, and wherein the second hinge portion is arranged away from the conductor element at the distance, and connected to each of the at least two feeding portion **(Shoji, as shown in fig. 4; Masaki, fig. 7)**.

-Regarding claim 24, the combination further discloses the conductor element is a ground pattern provided on a circuit board **(Schober, as disclosed in col. 3 lines 60-63)**.

-Regarding claim 25, the combination further discloses the connection portion is configured so that a capacity reactance occurs between the first hinge portion and the second hinge portion **(it would be obvious for a cable to do so in order to minimize a reflection level and input impedance)**.

-Regarding claim 26, the combination further discloses each of the at least two connection portions is connected to each of the at least two feeding portions, respectively **(Masaki, fig. 7)**.

-Regarding claim 27, the combination further discloses a switching portion provided in the second casing, and adapted to select any one of the at least two feeding portions to be electrically connected to a radio circuit disposed in the

Art Unit: 2618

second casing (**Shoji, switching portion 23, fig. 12 and switching portion 25, fig. 14**).

Response to Arguments

Applicant's arguments with respect to claims 1, 2, 4, 9 13 and 22-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PING Y. HSIEH whose telephone number is (571)270-3011. The examiner can normally be reached on Monday~Thursday 8am ~ 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PING Y HSIEH/
Examiner, Art Unit 2618

/Lana N. Le/
Primary Examiner, Art Unit 2614